

## § 45.71

(e) The bow height is defined as the vertical distance at the forward perpendicular between the waterline corresponding to the assigned summer freeboard at the designed trim and the top of the exposed deck at side.

### § 45.71 Midsummer freeboard.

The minimum midsummer freeboard (fms) in inches is obtained by the formula:

$$fms = f(s) - 0.3Ts$$

where:

$f(s)$ =summer freeboard in inches

$Ts$ =distance in feet between top of keel and the summer load line.

### § 45.73 Winter freeboard.

The minimum winter freeboard (fw) in inches is obtained by the formula:

$$fw = f(s) + Ts(200)/L$$

where:

$L$ =length  $L$  in feet but not less than 400 feet.

### § 45.75 Intermediate freeboard.

The minimum intermediate freeboard ( $f_i$ ) in inches is obtained by the formula:

$$f_i = f(s) + Ts(100)/L$$

where:

$L$ =length  $L$  in feet but not less than 400 feet.

### § 45.77 Salt water freeboard.

(a) The salt water addition in inches to freeboard applicable to each fresh water mark is obtained by the formula:

$$\text{Addition} = \Delta/41T$$

where:

$\Delta$ =displacement in fresh water, in tons of 2,240 pounds, at the summer load waterline.

$T$ =tons per inch immersion, of 2,240 pounds, in fresh water at the summer load waterline.

(b) When the displacement at the summer load waterline cannot be certified, the addition in inches to the minimum freeboard in fresh water may be obtained by multiplying 0.25 by the summer draught in feet measured from the top of the keel to the center of the load line diamond.

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### Subpart D—Conditions of Assignment

#### § 45.101 Purpose.

This subpart prescribes conditions that a vessel must meet to be eligible for assignment of a loadline under this part.

#### § 45.103 Structural stress and stability.

(a) The nature and stowage of the cargo, ballast, and other variable weights must be such as to make the vessel stable and avoid unacceptable structural stress.

(b) The vessel must meet all applicable stability and subdivision requirements of this chapter.

#### § 45.105 Information supplied to the master.

Unless otherwise authorized by the Commandant, the vessel must have on-board, in a form approved by the Commandant, sufficient information.

(a) To enable the master to load and ballast the vessel in a manner that avoids unacceptable stresses in the vessel's structure; and

(b) To guide the master as to the stability of the ship under varying conditions of service.

#### § 45.107 Strength of hull.

The general structural strength of the hull must be sufficient for the draught corresponding to the freeboard assigned and must be approved by the Commandant. Ships built and maintained in conformity with the requirements of a classification society may be recognized by the Commandant as possessing adequate strength.

#### § 45.109 Strength of superstructures and deckhouses.

Each superstructure or deckhouse used for accommodations of the crew must be approved by the Commandant or the approved assigning authority with regard to general strength and weathertightness. The Commandant may use the requirements of the assigning authority as a guide.

#### § 45.111 Strength of bulkheads at ends of superstructures.

Bulkheads at ends of enclosed superstructures must have sufficient